Title	**Competency and empowerment of project managers in China**
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Citation	**The 29th Annual Conference of the Association of Researchers in Construction Management (ARCOM), Reading, UK., 2-4 September 2013. In Proceedings of the 29th Annual ARCOM Conference, 2013, p. 0383-0392**
Issued Date	**2013**
URL	**http://hdl.handle.net/10722/187311**
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COMPETENCY AND EMPOWERMENT OF PROJECT MANAGERS IN CHINA

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The Agent Construction Management (ACM) system is one of the new measures adopted in government funded projects in China. The main characteristic of the ACM system is the introduction of an independent professional project management firm into the project management process. The ACM system is still in its trial stage in China and there is no unified qualification assessment system for agent construction organizations. While the importance of the project manager's competence is recognized, previous research also shows that project manager's empowerment is conducive to project performance. The definition of competency is confusing as several terms such as competency/competencies, competence/competences, capability and ability are used interchangeably and inconsistently. Competence is the state or quality of being adequately qualified -- the ability to perform a specific role (e.g. PMI's project manager's competency development framework). While empowerment can be viewed as a relational construct and considered within a more general concept of power, it is also a motivational (or psychological) construct. These two perspectives of empowerment are not independent and motivational empowerment may be an outcome of relational empowerment. This research aims to analyze the relationships of motivational empowerment and competency on job performance of the project managers in the ACM organisations. Regression modelling is adopted to analyze the data collected from 203 project managers involved in projects adopting ACM system. Findings support the relationships of competency and empowerment and their effect on project manager's job performance.

Keywords: agent, management system, competency, empowerment, job performance, project manager.

INTRODUCTION

The Agent Construction Management (ACM) system is one of the new measures adopted in government funded projects in China (Zhu et al., 2003) and it is alleged that the performance of ACM is essential for project management success. The main characteristic of the ACM system is the introduction of an independent agent-construction organisation, i.e., the professional project management firm, into the project management process. However, the ACM system is still in its trial stage in China and there is no unified qualification assessment system for the agent

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Chan IYS, Liu AMM, Cao S and Fellows R (2013) Competency and empowerment of project managers in China *In:* Smith, S.D and Ahiaga-Dagbui, D.D (Eds) *Procs 29th Annual ARCOM Conference,* 2-4 September 2013, Reading, UK, Association of Researchers in Construction Management, 383-392.

construction organizations. Though the ACM system was thoroughly researched and considered by the Chinese government before its adoption, the majority of research related to ACM focused on introducing the new project management mode, a set of (competency) professional skills requirement of the project manager and its positive effect on project performance. While the importance of project manager competence in their professional skills is recognized, previous research also shows that empowerment of project managers (PM) is conducive to project performance (Liu and Fang, 2006).

ACM presumes a set of PM's functional skills as guided by PMI (Project Management Institution) or other similar institutions for project management training, but the importance of PM's empowerment is not recognised sufficiently in China. Thus, this research aims to analyze the relationships of motivational empowerment and competency on job performance of the project managers in the ACM organisations.

AGENT CONSTRUCTION MANAGEMENT SYSTEM IN CHINA

The ACM system is mainly used in government funded projects in China. The total output value of the Chinese construction industry is about RMB 11.7 trillion in 2011, and its percentage contribution to GDP has increased to 6.8% in 2011 (National Bureau of Statistics of China, 2011). In the ACM system, the employer entrusts construction project management to a professional organization based on an agent relationship (Yin and Yan, 2006), and this system has been adopted in many provinces in China with apparent benefits (Hu and Yan, 2003), so Yin and Yan (2006) assert that it is advisable for all government funded projects to adopt the ACM system.

In ACM, the investor, the agent-construction organization and the end-user are the three principle parties and their respective rights and obligations are defined by contracts between them. The most important contract under the ACM system is the agent contract which defines the relationship between the client and the agent-construction organization. Selection of the agent-construction organisation (i.e., the professional project management organization) is made through tendering and the agent-construction organisation is responsible for construction project cost control and overall quality management.

There is a growing recognition of the centrality of the PM's competency to the performance of projects (Jaselskis and Ashley, 1991) and various efforts have been made to develop evaluative criteria and training needs (Dainty et al., 2003). China has embraced the competency frameworks from Western professional institutions (e.g., PMI and CIOB) as a basis to develop their PM training. However, construction is not a process of purchasing a finished product, but a process to produce a new product (Winch et al., 1998), thus the roles and functions of people, and how they behave, have a significance impact on the construction output. It is, therefore, important to recognise that success of project management is not merely embedded in the PM skills set as stipulated in various PM competency frameworks but also in the informal system of motivation and empowerment.

COMPETENCY

Previous management studies have investigated the impact of competency on performance (e.g., Du, 2010 and Pathirage et al., 2007) and some researchers endeavour to analyze the competencies required by project managers in this dynamic environment (Wysocki and Lewis, 2001; Suikki et al., 2004; Fisher et al., 2005; Muzio et al., 2007). For instance, Dainty et al. (2004) have argued for a competency-

based performance model for construction project managers where managerial behaviour input is appraised and nine performance indicators for PM competency are developed to comprise team building, leadership, decision-making, mutuality and approachability, honesty and integrity, communication, learning, understanding and application, self-efficacy, and maintenance of external relations.

However, the definitions of competence and competency are confusing and often used interchangeably in the literature. Researchers tend to distinguish these terms (Manley and Garbett, 2000; Moore et al., 2002; Westera, 2001; Woodruffe, 1993): i) competence refers to aspects of the job that an employee can perform, ii) competency is defined as behaviours an employee needs to display in order to do the job effectively, such as sensitivity; and iii) competencies refer to the attributes underpinning a behaviour. Competency, from the human resources field, means a standardized requirement for an individual to perform a specific job properly (McCelland, 1998). On the other hand, the UK Employment Department's Standards programme defines competence as a description of something that a person who works in a given occupational area should be able to do (Training Agency, 1988). Practitioners tend to view competency as the state or quality of being adequately qualified -- the ability to perform a specific role, e.g., PMI's project manager's competency development framework. (This research adopts the practitioners' view and with no distinction made between competency and competence).

Professional institutions, such as the Project Management Institution (PMI), the International Project Management Association (IPMA) and the Royal Institution of Chartered Surveyors (RICS project management faculty) establish different sets of competency requirements for their project managers. The Project Management Body of Knowledge (PMBOK) of PMI (2000) involves nine areas of project management, including project integration management, project scope management, project time management, project cost management, project quality management, project human resource management, project communication management, project risk management and project procurement management. The RICS Assessment of Professional Competence (APC) for project management consists of 15 competencies including identifying the client's objectives and priorities, developing the brief, carrying out option or feasibility studies, carrying out risk analysis and management exercise, establishing the budget and management exercises, advising on the project team selection, establishing the lines of communication and managing the information flow, selecting the correct procurement strategy, devising control systems and carrying out value analysis exercises, managing the integration and flow of design information, encouraging productive team working, co-ordinating legal and other consents, conducting tender evaluation and contractor selection, establishing the post contract time, cost and quality control systems, control, monitor and report through to project completion, the ability to 'get things done', developing a vision and strategy, and motivating project team members to achieve that vision and strategy, energizing people to achieve high levels of performance and to overcome barriers to change, conferring with others to come to terms with them or to reach an agreement, and the combination of problem definition, alternatives identification and analysis, and decision-making.

Although behavioural and management competencies of project managers are mostly generic across different industries, their technical /task competencies are highly specific to the context in which they work (Cheng et al., 2005), thus valid sets of competency should be developed specifically for enhancing performance of

professionals in their particular areas. Previous research has paid much attention to PMBOK (e.g., Crawford, 2005; Suikki et al., 2006), which mainly focuses on technical skills, with less emphasis on non-technical 'soft' skills such as leadership, team work and communication. However, 90-95% of PM performance is predicted by 'soft' skills, and only 5-10% is concerned with technical knowledge or ability (Muzio et al., 2007).

EMPOWERMENT

Previous studies have investigated the importance of empowerment in fostering job performance (see Hechanova et al. 2006; Mathieu 2006; Tuuli and Rowlinson, 2009). However, there are generally two schools of thought on empowerment in the literature (Conger and Kanungo, 1988; Spreitzer, 1997). The first group views empowerment as a relational construct and considered within a more general concept of power. The other group focuses on the motivational (or psychological) perspective of empowerment, which has been found to be very important for the behavioural outcomes of practitioners. Spreitzer (1997) points out that these two perspectives of empowerment are not independent and motivational empowerment may be an outcome of relational empowerment.

The relational perspective of empowerment mainly appears in management and social influence literature to describe the perceived power or control that an entity has over others - more specifically, the power to make decisions. Constructs of empowerment in management practice are derived from constructs of power and control (Conger and Kanungo, 1988).

Empowerment can also be viewed from a psychological perspective as motivational empowerment -- Conger and Kanungo (1988) posit that empowerment is, essentially, a motivational concept of self-efficacy. The motivational perspective of empowerment is more psychological in nature and is a comparatively subjective concept, e.g., 'to enable' rather than 'to delegate'. Enabling means creating conditions for improving motivation for task completion by developing a strong sense of personal efficacy. Empowerment can also be explained as a process whereby an individual's belief in his/her self-efficacy is enhanced based on Bandura's (1986) self-efficacy notion. To empower means either strengthening the belief of self-efficacy or weakening the feeling of powerlessness. Empowerment can be enhanced by both task-oriented and person-oriented leadership (Tuuli et al., 2012). It enables individuals to feel that they can perform their work competently, which further influences one's initiation and persistence in task behavior and performance (Liu et al., 2007). According to Thomas and Velthouse (1990), to empower is equal to giving power, and it can also mean 'to energize' when power is explained as energy.

Thomas and Velthouse (1990) operationalize empowerment in terms of intrinsic task motivation defined in four related cognitions in an individual's orientation to work role: impact, meaningfulness, self-determination and competency. While competency is already discussed, impact refers to producing intended effects in one's task environment; meaningfulness concerns the value of the task goal or purpose which is judged in the individuals' own standards, and self-determination involves causal responsibility for an individual's actions.

THEORETICAL MODEL

The importance of empowerment in fostering job performance, including both task and contextual performances, is well recognized (e.g., Hechanova et al., 2006;

Mathieu, 2006; Tuuli and Rowlinson, 2009). Motivational empowerment is predicted to influence one's job performance by affecting behaviours through instrumentality, expectations, and valence of an individual. For individuals who perceive their tasks to be influential, meaningful, achievable and valuable, much effort will be put on achieving the tasks. However, since motivational empowerment and competency are closely interactive, the relationship between motivational empowerment and job performance can be influenced by the competency of an individual (Houtzagers, 1999).

Motivational empowerment is concerned with the fit between an individual, his /her job and the environment. Contingency theory proposes that performance depends on the 'fit' between various individual, job demands and organizational environment factors. Optimized performance depends on the best fit between an individual's characteristics (vision, values, career stages, etc.), job demands (which influence one's performance directly via various tasks, functions, and roles) and the organisational environment (Boyatzis, 1982, 2006a). Organizational environment includes culture and climate, structure and systems, maturity of industry, core competence of the organization, etc. As indicated by Dainty et al. (2002), empowerment alone may not necessarily drive good performance. Factors in implementation and contextual aspects (e.g., power of actors, organizational culture and environment) should also be considered. For instance, work empowerment enhances job performance of construction professionals through motivation and commitment (Liu et al., 2003) and Houtzagers (1999) points out that competency and skill management have been closely linked to the efforts of organizations to empower employees in order to increase organization's competitive advantage and effectiveness. In view of the interaction between motivational empowerment and competency, this study investigates the moderating effect of competency on the motivational empowerment-job performance relationship with the following hypotheses:

Hypothesis 1 : Motivational empowerment is positively associated with job performance of project managers in ACM.

Hypothesis 2 : The relationship between motivational empowerment and job performance is moderated by competency of project managers in ACM.

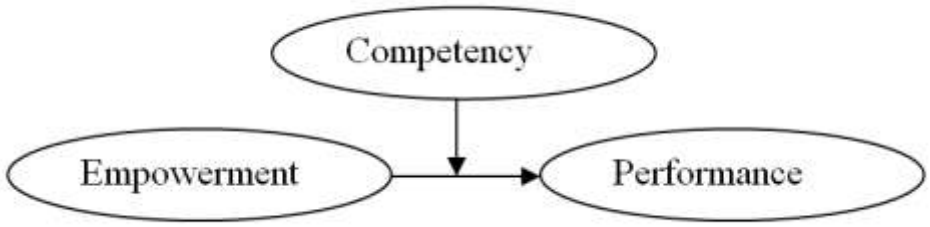

Figure 1 Conceptual Model of Empowerment, Competency and Performance

DATA COLLECTION

A questionnaire survey approach is adopted to investigate the above hypothetical relationships. A questionnaire for competency, empowerment and job performance is designed based on a literature review, and back translation is adopted and tested in a pilot study with 23 project management professionals in China. Based on the qualification assessment criteria, there are 1507 agent construction organizations qualified as class 'A' in 2007 in China, of which 75 organizations (5%) are selected

randomly for distribution of 750 questionnaires with 203 returned (response rate of 27%). Nearly 50% are aged 31-40; 80% are male; 80% with bachelor degrees or above; the majority has accumulated more than 5 years' experience in the industry (69%) and nearly 40% of the respondents have over10 years' experience.

There are three main variables measured in the study: competency, empowerment and job performance. As the APC of RICS does not focus only on professional practice (e.g., control on time, cost and quality) and business (e.g., finance, portfolio, orientation, etc.) aspects, but also denotes the importance of interpersonal and leadership skills, RICS's APC competency list is adopted to measure the professional practice (15 items) and interpersonal skills (6 items). According to the Intentional Change Theory, professionals are stimulated to develop their competencies in accordance to the various core competencies designed in the accredited courses in their professional development process (Boyatzis, 2006b). Measurement is based on Bloom's taxonomy which contains six levels of competency acquirement, including knowledge, comprehension, application, analysis, synthesis and evaluation (Bloom, 1956; Huitt, 2011). Level 0 is added to denote absence of the particular competency.

Motivational empowerment employs a 9-item scale which is developed based on the work of Thomas and Velthouse (1990) by Spreitzer (1997) to define four cognitive determinants of perceived intrinsic motivation for empowerment, including meaning, self-determination, impact and competency. A five-point Likert response format from 1 (strongly disagree) to 5 (strongly agree) is employed, allowing a neutral point.

Successful performance is referred as the accomplishment of task goals and target output levels. The performance scale developed by Riketta and Landerer (2002) is adopted to measure three aspects: i) respondents' self-evaluated performance, ii) their perception on the satisfaction of supervisor towards their performance, and iii) their perception on the satisfaction of colleagues towards their performance. A five-point Likert response format from 1 (strongly disagree) to 5 (strongly agree) is again adopted.

RESULTS AND DISCUSSION

Two tests are carried out; first the influences of empowerment and competency on job performance is analysed by standard regression modelling as shown below in Table 1, and second, the moderating effect of competency on the empowerment-performance relationship as shown in Table 2. Conbrach alpha values lower than 0.6 are considered to be unacceptable in this study (Murphy and Davidshofer, 1988).

Table 1: Base model between motivational empowerment, competency and job performance

Dependent variable	Independent variable	B	S.E.	Sig.	R	R2	Sig.
Job performance	(Constant)	5.187	0.962	0.000	0.618	0.382	0.000
	Motivational Empowerment	0.167	0.023	0.000			
	Competency	0.034	0.007	0.000			

Significant relationships are found between motivational empowerment, competency and job performance. It has been established that empowerment enhances performance of PMs (Liu and Fang, 2006) via power sharing and power amassing. The result in Table 1 validates the claim of the empowerment-performance

relationship and shows that motivational empowerment is a stronger determinant of job performance than competency.

The moderating effect of competency on motivational competency-job performance relationship is investigated next as shown in Table 2. Moderating effects occur when the relationships between two variables (predictor and dependent variable) are affected by a third variable (moderator) (Pallant, 2005).

Table 2: Interaction model between competency, motivational empowerment and job performance

Dependent variable	Independent variables	B	S.E.	Sig.	R	R2	Sig.
Job performance	(Constant)	7.578	1.029	0.000	0.617	0.381	0.000
	Motivational Empowerment	0.115	0.029	0.000			
	Competency x Motivational Empowerment	0.001	0.000	0.000			

To test the moderating effect of competency, the Cohen's effect size (f2) is measured (Chin, 1998) by :

"R2 (interaction model) – R2 (base model) / 1 - R2 (interaction model)"

According to Cohen (1988), f2 values of 0.02, 0.15, or 0.35 indicate the small, medium, or large influences of the particular variables. The moderating effect of competency is found to be medium in the current study.

CONCLUSIONS

The ACM system is a relatively new system for government funded projects in China. In view of the important role of ACM towards project success, this research analysed the association between motivational empowerment, competency and job performance of project managers in ACM organisations. The results indicate that motivational empowerment is a stronger determinant of job performance than competency, and the relationship between motivational empowerment and job performance is moderated by competency. Practitioners tend to put emphases on training of professional competencies but the results recommend leaders to foster motivational empowerment, which 'enables' impact, self-determination and meaningfulness, amongst project managers in ACM.

Although the APC is a list of competency developed by practitioners, these practice based knowledge can be bounded by its contextual nature where practitioners' behaviors can be susceptible to their implicit personal identity and values (Cicmil et al., 2006). Since China is still a developing country, there may be discrepancies between the social and industrial environments between East and West that influence the dimensions of competencies; hence, there is room to develop a more comprehensive competency-based model appropriate in the Chinese context.

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